Release notes for ENDF/B Development n-019_K_040 evaluation

April 26, 2017

- **checkr** Warnings:

  1. A previous error halted parsing of the current section
     MAT=1928, MF= 1, MT=451 (1): Parsing stopped

     ```
     ERROR(S) FOUND IN MAT=1928, MF= 1, MT=451
         SECTION CANNOT BE CHECKED FROM SEQUENCE NUMBER     148 TO     210
     ```

- **checkr** Errors:

  1. A variable is outside the allowed ENDF range
     MAT=1928, MF= 1, MT=451 (0): Variable range

     ```
     ERROR(S) FOUND IN MAT=1928, MF= 1, MT=451
         MOD =    3 OUT OF RANGE    0 -    0          RECORD NUMBER     148
     ```

  2. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=1928, MF= 2, MT=151 (0): Directory (b)

     ```
     ERROR(S) FOUND IN MAT=1928, MF= 2, MT=151
         SECTION  2/151 NOT IN DIRECTORY              RECORD NUMBER     212
     ```

  3. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=1928, MF= 3, MT= 1 (0): Directory (b)

     ```
     ERROR(S) FOUND IN MAT=1928, MF= 3, MT=  1
         SECTION  3/  1 NOT IN DIRECTORY              RECORD NUMBER     218
     ```

  4. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=1928, MF= 3, MT= 2 (0): Directory (b)

     ```
     ERROR(S) FOUND IN MAT=1928, MF= 3, MT=  2
         SECTION  3/  2 NOT IN DIRECTORY              RECORD NUMBER     263
     ```

  5. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=1928, MF= 3, MT= 4 (0): Directory (b)

     ```
     ERROR(S) FOUND IN MAT=1928, MF= 3, MT=  4
         SECTION  3/  4 NOT IN DIRECTORY              RECORD NUMBER     283
     ```

  6. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=1928, MF= 3, MT= 16 (0): Directory (b)

     ```
     ERROR(S) FOUND IN MAT=1928, MF= 3, MT= 16
         SECTION  3/ 16 NOT IN DIRECTORY              RECORD NUMBER     300
     ```

  7. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=1928, MF= 3, MT= 22 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=1928, MF= 3, MT= 22
   SECTION  3/ 22 NOT IN DIRECTORY                RECORD NUMBER    307
```

8. Missing a section in directory so your directory is messed up. This error will break everything else
   MAT=1928, MF= 3, MT= 28 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=1928, MF= 3, MT= 28
   SECTION  3/ 28 NOT IN DIRECTORY                RECORD NUMBER    314
```

9. Missing a section in directory so your directory is messed up. This error will break everything else
   MAT=1928, MF= 3, MT= 51 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=1928, MF= 3, MT= 51
   SECTION  3/ 51 NOT IN DIRECTORY                RECORD NUMBER    321
```

10. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=1928, MF= 3, MT= 52 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=1928, MF= 3, MT= 52
   SECTION  3/ 52 NOT IN DIRECTORY                RECORD NUMBER    338
```

11. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=1928, MF= 3, MT= 53 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=1928, MF= 3, MT= 53
   SECTION  3/ 53 NOT IN DIRECTORY                RECORD NUMBER    352
```

12. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=1928, MF= 3, MT= 54 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=1928, MF= 3, MT= 54
   SECTION  3/ 54 NOT IN DIRECTORY                RECORD NUMBER    365
```

13. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=1928, MF= 3, MT= 55 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=1928, MF= 3, MT= 55
   SECTION  3/ 55 NOT IN DIRECTORY                RECORD NUMBER    377
```

14. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=1928, MF= 3, MT= 91 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=1928, MF= 3, MT= 91
   SECTION  3/ 91 NOT IN DIRECTORY                RECORD NUMBER    388
```

15. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=1928, MF= 3, MT=102 (0): Directory (b)

2

```
      ERROR(S) FOUND IN MAT=1928, MF= 3, MT=102
         SECTION  3/102 NOT IN DIRECTORY                RECORD NUMBER     399
```

16. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=1928, MF= 3, MT=103 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=1928, MF= 3, MT=103
         SECTION  3/103 NOT IN DIRECTORY                RECORD NUMBER     415
```

17. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=1928, MF= 3, MT=107 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=1928, MF= 3, MT=107
         SECTION  3/107 NOT IN DIRECTORY                RECORD NUMBER     426
```

18. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=1928, MF= 4, MT= 2 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=1928, MF= 4, MT=  2
         SECTION  4/  2 NOT IN DIRECTORY                RECORD NUMBER     438
```

19. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=1928, MF= 4, MT= 16 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=1928, MF= 4, MT= 16
         SECTION  4/ 16 NOT IN DIRECTORY                RECORD NUMBER     584
```

20. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=1928, MF= 4, MT= 22 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=1928, MF= 4, MT= 22
         SECTION  4/ 22 NOT IN DIRECTORY                RECORD NUMBER     587
```

21. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=1928, MF= 4, MT= 28 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=1928, MF= 4, MT= 28
         SECTION  4/ 28 NOT IN DIRECTORY                RECORD NUMBER     590
```

22. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=1928, MF= 4, MT= 51 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=1928, MF= 4, MT= 51
         SECTION  4/ 51 NOT IN DIRECTORY                RECORD NUMBER     593
```

23. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=1928, MF= 4, MT= 52 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=1928, MF= 4, MT= 52
     SECTION  4/ 52 NOT IN DIRECTORY                RECORD NUMBER     620
```

24. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=1928, MF= 4, MT= 53 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=1928, MF= 4, MT= 53
     SECTION  4/ 53 NOT IN DIRECTORY                RECORD NUMBER     646
```

25. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=1928, MF= 4, MT= 54 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=1928, MF= 4, MT= 54
     SECTION  4/ 54 NOT IN DIRECTORY                RECORD NUMBER     670
```

26. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=1928, MF= 4, MT= 55 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=1928, MF= 4, MT= 55
     SECTION  4/ 55 NOT IN DIRECTORY                RECORD NUMBER     690
```

27. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=1928, MF= 4, MT= 91 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=1928, MF= 4, MT= 91
     SECTION  4/ 91 NOT IN DIRECTORY                RECORD NUMBER     710
```

28. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=1928, MF= 5, MT= 16 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=1928, MF= 5, MT= 16
     SECTION  5/ 16 NOT IN DIRECTORY                RECORD NUMBER     746
```

29. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=1928, MF= 5, MT= 22 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=1928, MF= 5, MT= 22
     SECTION  5/ 22 NOT IN DIRECTORY                RECORD NUMBER     873
```

30. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=1928, MF= 5, MT= 28 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=1928, MF= 5, MT= 28
     SECTION  5/ 28 NOT IN DIRECTORY                RECORD NUMBER     1003
```

31. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=1928, MF= 5, MT= 91 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=1928, MF= 5, MT= 91
         SECTION  5/ 91 NOT IN DIRECTORY                 RECORD NUMBER    1132
```

32. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=1928, MF=12, MT= 16 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=1928, MF=12, MT= 16
         SECTION 12/ 16 NOT IN DIRECTORY                 RECORD NUMBER    1348
```

33. Missing a gamma spectrum for continuum of gammas
    MAT=1928, MF=12, MT= 16 (1): No gamma spectrum

```
      ERROR(S) FOUND IN MAT=1928, MF=12, MT= 16
         CONTINUUM PHOTONS REQUIRE A SECTION IN MF=15
```

34. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=1928, MF=12, MT= 22 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=1928, MF=12, MT= 22
         SECTION 12/ 22 NOT IN DIRECTORY                 RECORD NUMBER    1356
```

35. Missing a gamma spectrum for continuum of gammas
    MAT=1928, MF=12, MT= 22 (1): No gamma spectrum

```
      ERROR(S) FOUND IN MAT=1928, MF=12, MT= 22
         CONTINUUM PHOTONS REQUIRE A SECTION IN MF=15
```

36. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=1928, MF=12, MT= 28 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=1928, MF=12, MT= 28
         SECTION 12/ 28 NOT IN DIRECTORY                 RECORD NUMBER    1365
```

37. Missing a gamma spectrum for continuum of gammas
    MAT=1928, MF=12, MT= 28 (1): No gamma spectrum

```
      ERROR(S) FOUND IN MAT=1928, MF=12, MT= 28
         CONTINUUM PHOTONS REQUIRE A SECTION IN MF=15
```

38. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=1928, MF=12, MT= 51 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=1928, MF=12, MT= 51
         SECTION 12/ 51 NOT IN DIRECTORY                 RECORD NUMBER    1374
```

39. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=1928, MF=12, MT= 52 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=1928, MF=12, MT= 52
         SECTION 12/ 52 NOT IN DIRECTORY                 RECORD NUMBER    1378
```

40. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1928, MF=12, MT= 53 (0): Directory (b)

```
     ERROR(S) FOUND IN MAT=1928, MF=12, MT= 53
        SECTION 12/ 53 NOT IN DIRECTORY                RECORD NUMBER    1382
```

41. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1928, MF=12, MT= 54 (0): Directory (b)

```
     ERROR(S) FOUND IN MAT=1928, MF=12, MT= 54
        SECTION 12/ 54 NOT IN DIRECTORY                RECORD NUMBER    1386
```

42. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1928, MF=12, MT= 55 (0): Directory (b)

```
     ERROR(S) FOUND IN MAT=1928, MF=12, MT= 55
        SECTION 12/ 55 NOT IN DIRECTORY                RECORD NUMBER    1390
```

43. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1928, MF=12, MT= 91 (0): Directory (b)

```
     ERROR(S) FOUND IN MAT=1928, MF=12, MT= 91
        SECTION 12/ 91 NOT IN DIRECTORY                RECORD NUMBER    1394
```

44. Missing a gamma spectrum for continuum of gammas
MAT=1928, MF=12, MT= 91 (1): No gamma spectrum

```
     ERROR(S) FOUND IN MAT=1928, MF=12, MT= 91
        CONTINUUM PHOTONS REQUIRE A SECTION IN MF=15
```

45. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1928, MF=12, MT=102 (0): Directory (b)

```
     ERROR(S) FOUND IN MAT=1928, MF=12, MT=102
        SECTION 12/102 NOT IN DIRECTORY                RECORD NUMBER    1405
```

46. Missing a gamma spectrum for continuum of gammas
MAT=1928, MF=12, MT=102 (1): No gamma spectrum

```
     ERROR(S) FOUND IN MAT=1928, MF=12, MT=102
        CONTINUUM PHOTONS REQUIRE A SECTION IN MF=15
```

47. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1928, MF=12, MT=103 (0): Directory (b)

```
     ERROR(S) FOUND IN MAT=1928, MF=12, MT=103
        SECTION 12/103 NOT IN DIRECTORY                RECORD NUMBER    1419
```

48. Missing a gamma spectrum for continuum of gammas
MAT=1928, MF=12, MT=103 (1): No gamma spectrum

```
        ERROR(S) FOUND IN MAT=1928, MF=12, MT=103
            CONTINUUM PHOTONS REQUIRE A SECTION IN MF=15
```

49. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1928, MF=12, MT=107 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=1928, MF=12, MT=107
            SECTION 12/107 NOT IN DIRECTORY                 RECORD NUMBER    1432
```

50. Missing a gamma spectrum for continuum of gammas
MAT=1928, MF=12, MT=107 (1): No gamma spectrum

```
        ERROR(S) FOUND IN MAT=1928, MF=12, MT=107
            CONTINUUM PHOTONS REQUIRE A SECTION IN MF=15
```

51. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1928, MF=14, MT= 16 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=1928, MF=14, MT= 16
            SECTION 14/ 16 NOT IN DIRECTORY                 RECORD NUMBER    1446
```

52. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1928, MF=14, MT= 22 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=1928, MF=14, MT= 22
            SECTION 14/ 22 NOT IN DIRECTORY                 RECORD NUMBER    1448
```

53. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1928, MF=14, MT= 28 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=1928, MF=14, MT= 28
            SECTION 14/ 28 NOT IN DIRECTORY                 RECORD NUMBER    1450
```

54. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1928, MF=14, MT= 51 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=1928, MF=14, MT= 51
            SECTION 14/ 51 NOT IN DIRECTORY                 RECORD NUMBER    1452
```

55. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1928, MF=14, MT= 52 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=1928, MF=14, MT= 52
            SECTION 14/ 52 NOT IN DIRECTORY                 RECORD NUMBER    1454
```

56. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1928, MF=14, MT= 53 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=1928, MF=14, MT= 53
            SECTION 14/ 53 NOT IN DIRECTORY                 RECORD NUMBER    1456
```

57. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1928, MF=14, MT= 54 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=1928, MF=14, MT= 54
       SECTION 14/ 54 NOT IN DIRECTORY              RECORD NUMBER    1458
```

58. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1928, MF=14, MT= 55 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=1928, MF=14, MT= 55
       SECTION 14/ 55 NOT IN DIRECTORY              RECORD NUMBER    1460
```

59. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1928, MF=14, MT= 91 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=1928, MF=14, MT= 91
       SECTION 14/ 91 NOT IN DIRECTORY              RECORD NUMBER    1462
```

60. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1928, MF=14, MT=102 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=1928, MF=14, MT=102
       SECTION 14/102 NOT IN DIRECTORY              RECORD NUMBER    1464
```

61. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1928, MF=14, MT=103 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=1928, MF=14, MT=103
       SECTION 14/103 NOT IN DIRECTORY              RECORD NUMBER    1466
```

62. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1928, MF=14, MT=107 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=1928, MF=14, MT=107
       SECTION 14/107 NOT IN DIRECTORY              RECORD NUMBER    1468
```

63. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1928, MF=15, MT= 16 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=1928, MF=15, MT= 16
       SECTION 15/ 16 NOT IN DIRECTORY              RECORD NUMBER    1471
```

64. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1928, MF=15, MT= 22 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=1928, MF=15, MT= 22
       SECTION 15/ 22 NOT IN DIRECTORY              RECORD NUMBER    1601
```

65. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1928, MF=15, MT= 28 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=1928, MF=15, MT= 28
        SECTION 15/ 28 NOT IN DIRECTORY                RECORD NUMBER    1725
```

66. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1928, MF=15, MT= 91 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=1928, MF=15, MT= 91
        SECTION 15/ 91 NOT IN DIRECTORY                RECORD NUMBER    1858
```

67. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1928, MF=15, MT=102 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=1928, MF=15, MT=102
        SECTION 15/102 NOT IN DIRECTORY                RECORD NUMBER    2177
```

68. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1928, MF=15, MT=103 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=1928, MF=15, MT=103
        SECTION 15/103 NOT IN DIRECTORY                RECORD NUMBER    2927
```

69. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1928, MF=15, MT=107 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=1928, MF=15, MT=107
        SECTION 15/107 NOT IN DIRECTORY                RECORD NUMBER    3328
```

- `fudge-4.0` Warnings:

  1. Cross section does not match sum of linked reaction cross sections
  crossSectionSum label 0: total (Error # 0): CS Sum.

  ```
  WARNING: Cross section does not match sum of linked reaction cross sections! Max diff: 1.13%
  ```

  2. Cross section does not match sum of linked reaction cross sections
  crossSectionSum label 1: (z,n) (Error # 0): CS Sum.

  ```
  WARNING: Cross section does not match sum of linked reaction cross sections! Max diff: 0.12%
  ```

- `fudge-4.0` Errors:

  1. Calculated and tabulated Q values disagree.
  reaction label 7: n[multiplicity:'2'] + K39 + gamma (Error # 0): Q mismatch

  ```
  WARNING: Calculated and tabulated Q-values disagree: -7788750.517562866 eV vs -7800480. eV!
  ```

  2. Calculated and tabulated Q values disagree.
  reaction label 8: n + H1 + Ar39 + gamma (Error # 0): Q mismatch

9

```
WARNING: Calculated and tabulated Q-values disagree: -7571403.455986023 eV vs -7583310. eV!
```

3. Calculated and tabulated Q values disagree.
   reaction label 11: H1 + (Ar40_s ->Ar40 + gamma) (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: 2297798.541954041 eV vs 2287570. eV!
```

- `njoy2012` Warnings:

  1. Evaluation has no resonance parameters given
     unresr...calculation of unresolved resonance cross sections (0): No RR

     ```
     ---message from unresr---mat 1928 has no resonance parameters
                             copy as is to nout
     ```

  2. Evaluation has no resonance parameters given
     purr...probabalistic unresolved calculation (0): No RR

     ```
     ---message from purr---mat 1928 has no resonance parameters
                           copy as is to nout
     ```

  3. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
     groupr...compute self-shielded group-averaged cross-sections (0): GROUPR/conver (0)

     ```
     ---message from conver---cannot do complete particle production for mt= 16
                             only mf4/mf5 provided
     ```

  4. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
     groupr...compute self-shielded group-averaged cross-sections (1): GROUPR/conver (0)

     ```
     ---message from conver---cannot do complete particle production for mt= 22
                             only mf4/mf5 provided
     ```

  5. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
     groupr...compute self-shielded group-averaged cross-sections (2): GROUPR/conver (0)

     ```
     ---message from conver---cannot do complete particle production for mt= 28
                             only mf4/mf5 provided
     ```

  6. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
     groupr...compute self-shielded group-averaged cross-sections (3): GROUPR/conver (0)

     ```
     ---message from conver---cannot do complete particle production for mt= 91
                             only mf4/mf5 provided
     ```